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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,678	04/14/2004	Shozo Hanai	Q80632	4888

23373 7590 11/28/2006

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
ESTREMSKY, SHERRY LYNN	
ART UNIT	**PAPER NUMBER**
3681	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/823,678	HANAI, SHOZO	
	Examiner	Art Unit	
	Sherry L. Estremsky	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4* is/are rejected.

7)☒ Claim(s) *3* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 17, 2006 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiya, U. S. Patent Application Publication 2004/0065165 in view of Aldous, U. S. Patent 3,788,631.

Sekiya shows in figures 5a, 5b, 6a, and 6b a throttle grip apparatus.

A throttle grip 40 is rotatably mounted on the leading end of a handlebar 1 of a vehicle.

A case 51 is disposed on the handlebar 1 at a position adjacent to the throttle grip 40.

A throttle opening angle sensor 50 is included for detecting the rotation angle of the throttle grip and is disposed in the case 51 (paragraphs [0067] and [0069], lines 1-2).

An energizing unit is included for energizing the throttle grip in a direction to return to the initial position thereof. An engine of the vehicle is controlled in accordance with the detected value of the throttle opening angle sensor.

The energizing unit includes a spiral spring 43mounted on a base end side of the throttle grip and having one end fixed to the base end portion of the throttle grip and the other end fixed to the case, wherein the spiral spring is wound up as the throttle grip is rotated from the initial state thereof (as described by "The accelerator grip 40 is urged to return to a specific position (the initial position where it stops to rotate counterclockwise in FIG. 6(b)) by a return spring 43 as the urging means.", paragraph [0068], lines 6-9).
(claim 1)

Sekiya does not teach that both ends of the spiral spring are disposed at the same axial position.

Aldous discloses a spiral spring 1a with ends 3 and 4 disposed at the same axial position.

Frictional resistance is increased as the spiral spring is wound up (column 2, lines 52-55 and column 3, lines 44-45).

The spiral spring changes in such a manner that mutually contacted portions of the spiral spring increase gradually as the spiral spring is wound up (the cause of the "intercoil friction" and a typical operational feature of spiral springs having both end at the same axial position).

The description of figure 4 in paragraph 2, lines 48-55 includes a description of a hysteresis characteristic. Figure 4 shows the torque characteristic of the spring as it is being unwound, with torque produced represented by the vertical axis. The torque characteristic of the spring as it is being wound is not shown, though it is described as being substantially identical in shape to that of it being unwound, but *having higher torque figures*. This is hysteresis.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Sekiya to use a spiral spring having two ends disposed in the

same axial position in view of Aldous because the spring would combine a high starting torque with a low torque gradient (Aldous, column 1, lines 24-26) and it would decrease the axial length of the throttle grip apparatus.

Allowable Subject Matter

4. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments regarding claims 1, 2, and 4 filed August 17, 2006 have been fully considered but they are not persuasive. The applicant states that the fact that the shapes of the torque characteristic curves are substantially identical for the unwinding and winding of the spring means that the intercoil friction should be constant. It is the examiner's position that if the two curves were perfectly identical, in other words, the winding curve was a constant torque increase over the unwinding curve from zero angular deflection to the maximum angular deflection due to intercoil friction, then the constant torque increase would likely be caused by constant intercoil friction. However, the winding torque characteristic curve would necessarily begin at the same place as the unwinding torque characteristic curve (zero angular displacement and zero torque) and would have to increase in torque with increasing angular displacement faster than the unwinding torque characteristic curve in order to have "higher torque figures". The difference in torque between the two curves would not be constant, but increasing, at least initially. The two curves would be substantially identical in shape, though not perfectly identical.

The applicant also states that spring 43 of Sekiya appears to urge member 44 to the right towards casing 52 in figure 6 such that a sealing of the casing is ensured. The only description of the function of spring 43 is its urging a rotational position of the throttle grip (paragraph [0068]). There is no disclosure or suggestion of the spring exerting an axial force as suggested by the applicant. Some discussion concerning the sealing of the casing 52 (51) is made in paragraph [0069], but the spring is not mentioned in connection with this.

The applicant's remarks concerning claim 3 are persuasive.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent re. 34,302 (Imoehl) July 1993 - discloses imparting hysteresis to a throttle actuator with a position sensor so that the feel simulates the feel of a strictly mechanical system.

U. S. Patent 6,978,694 (Peppard) December 2005 - discloses a handlebar throttle grip with sensor in a housing to output an angular position representative signal to a throttle control system, including an arrangement having a spring to generate torque characteristic hysteresis.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherry L. Estremsky whose telephone number is (571) 272-7090. The examiner can normally be reached on Tuesday and Friday from 7:30 a.m. to 6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SLE

SHERRY ESTREMSKY
PRIMARY EXAMINER
AU3681 11-24-06